

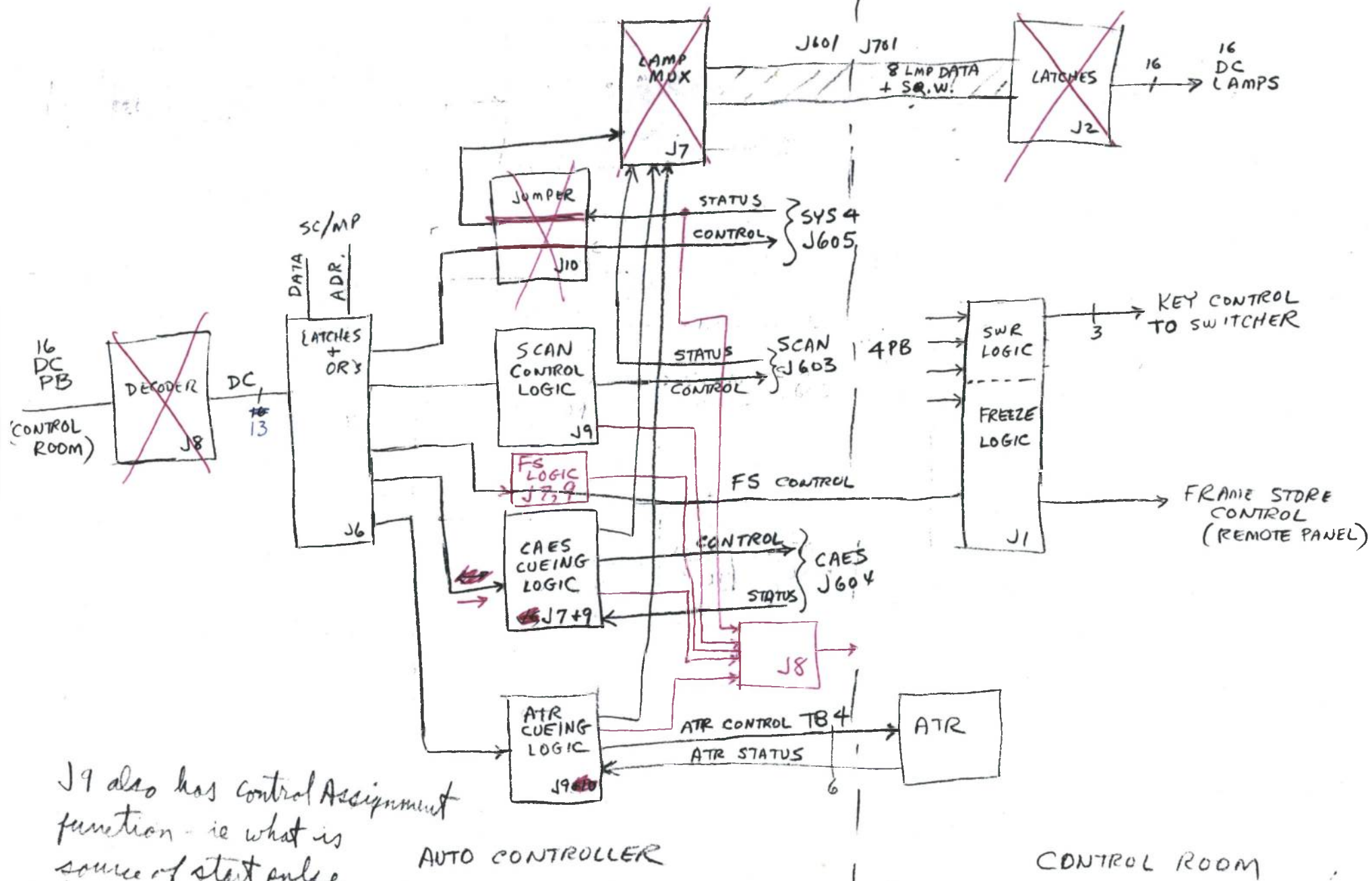
~~Automation~~
~~switcher~~
~~controller test~~

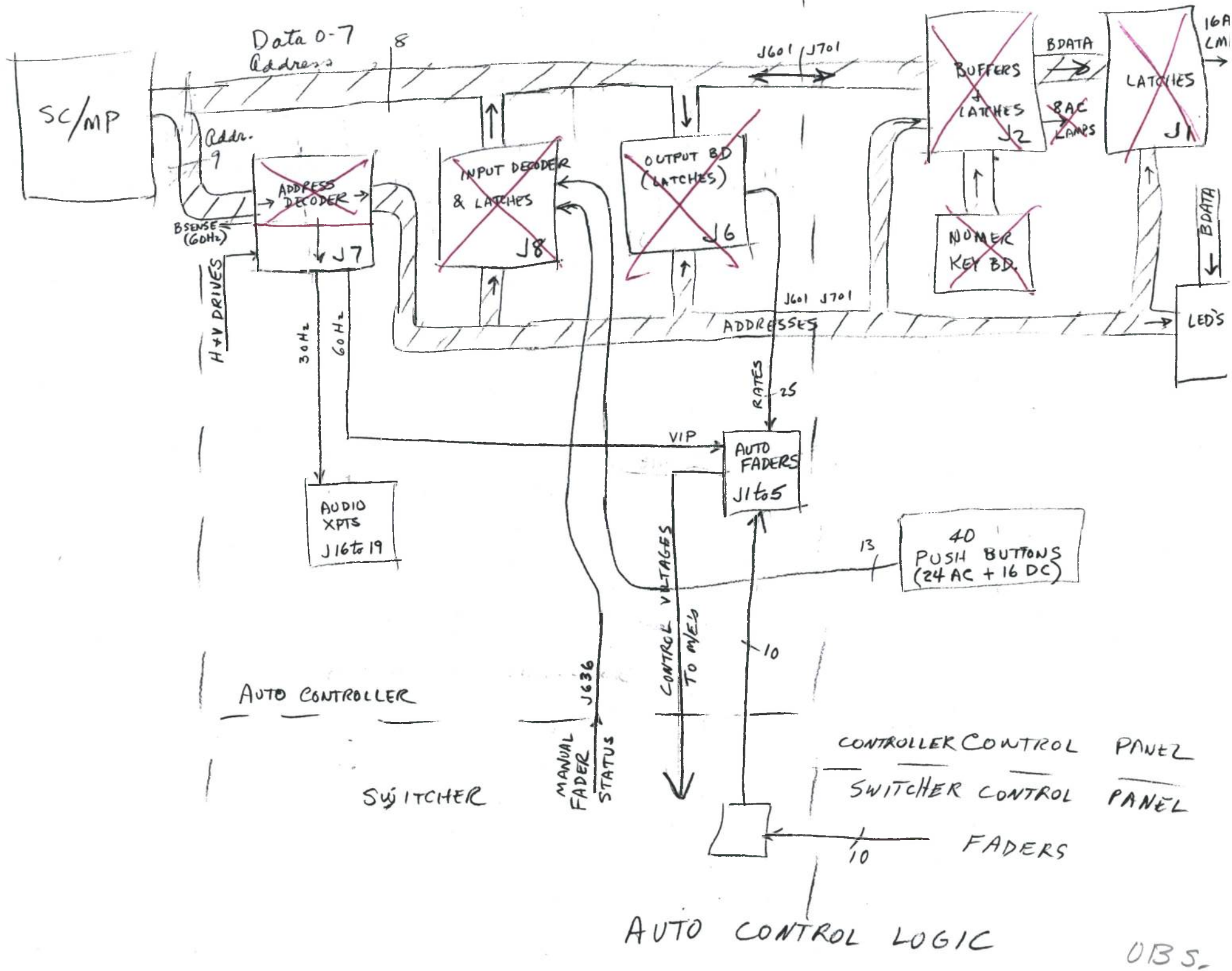
CONTROLLER INTERFACE

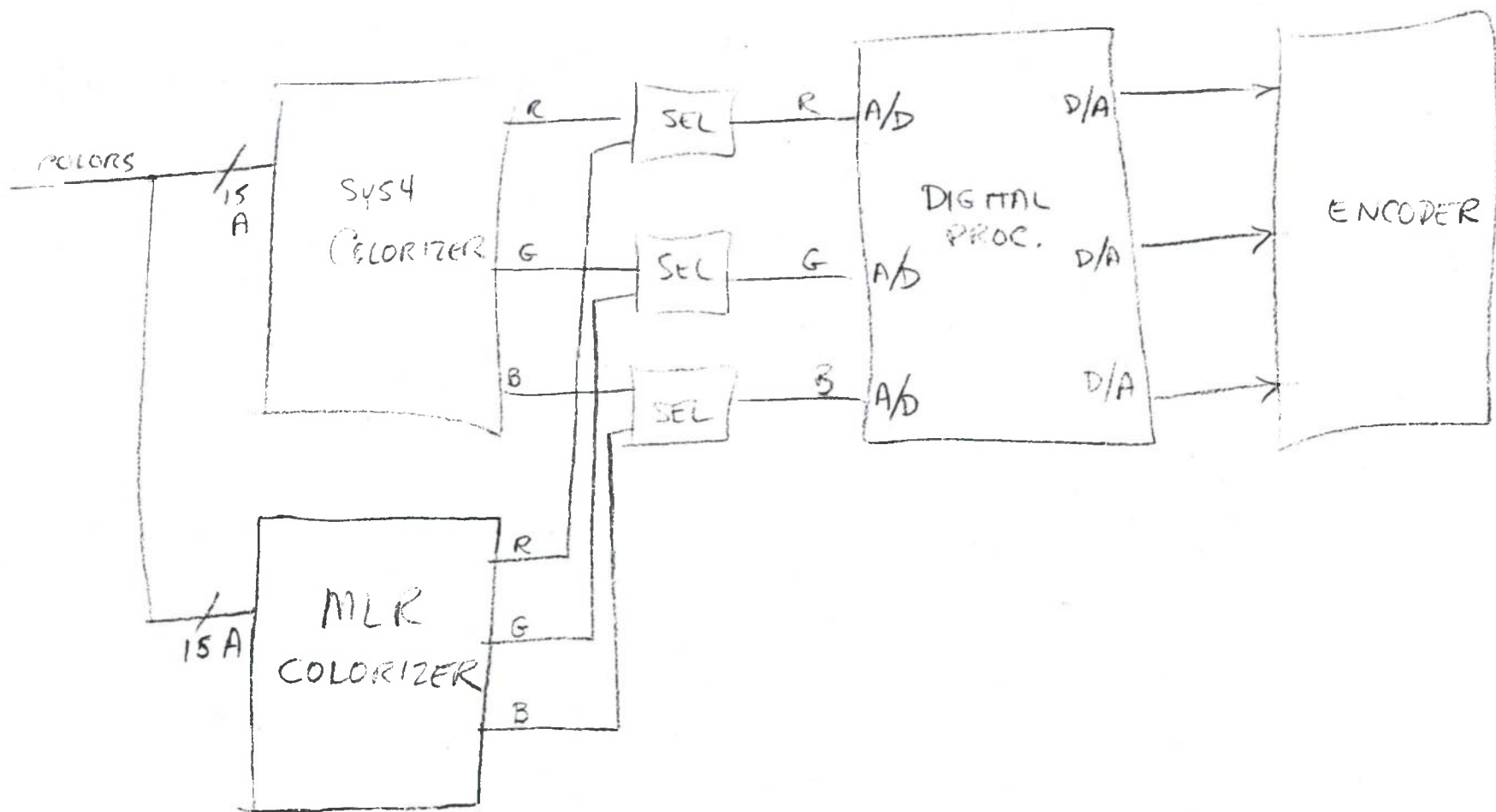
COMPUTER IMAGE CORPORATION

PRODUCTION CONTROLLER

INTERFACE







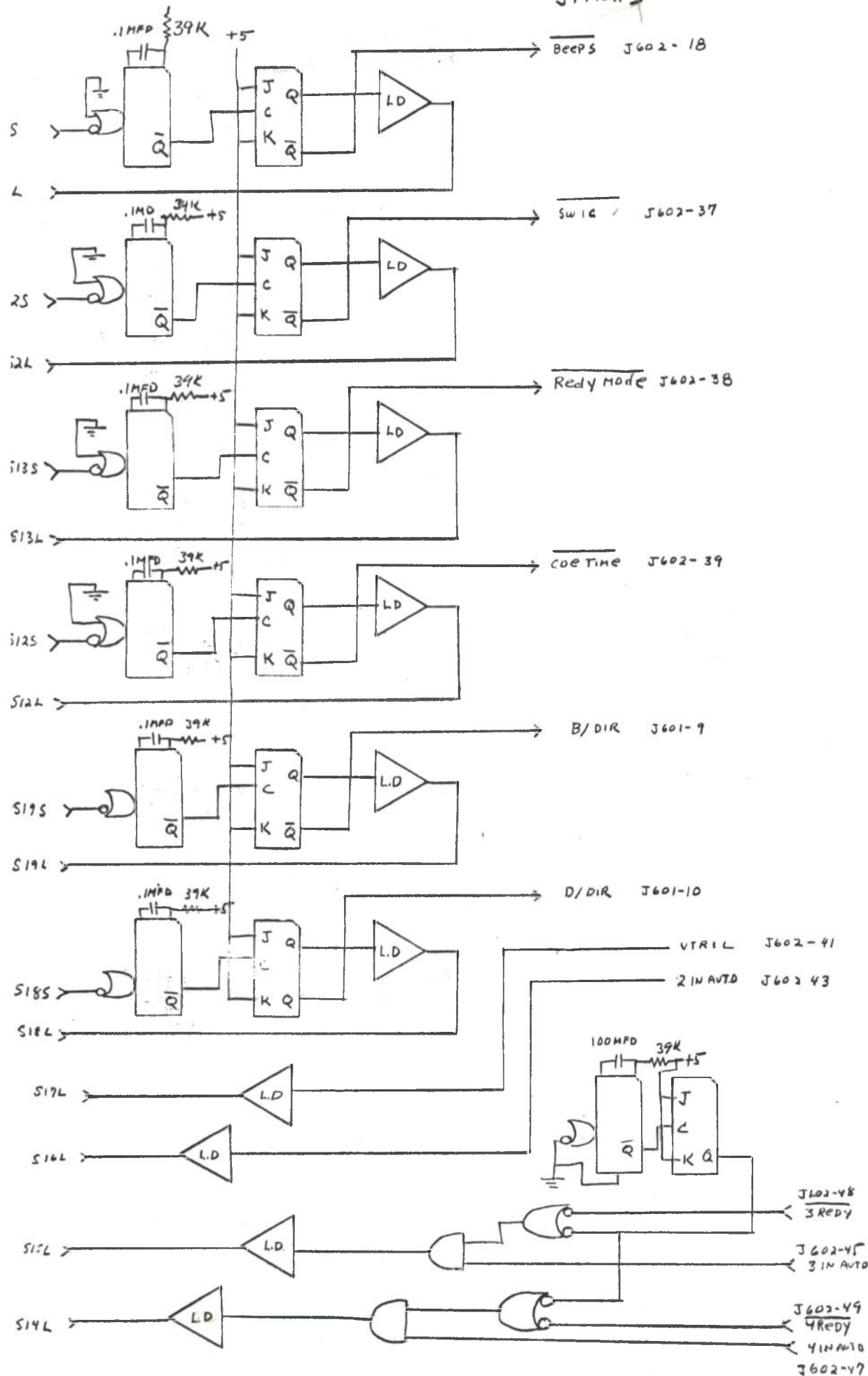
SC/MP for Tap Timing ^{only} needed:

Control Panel J2

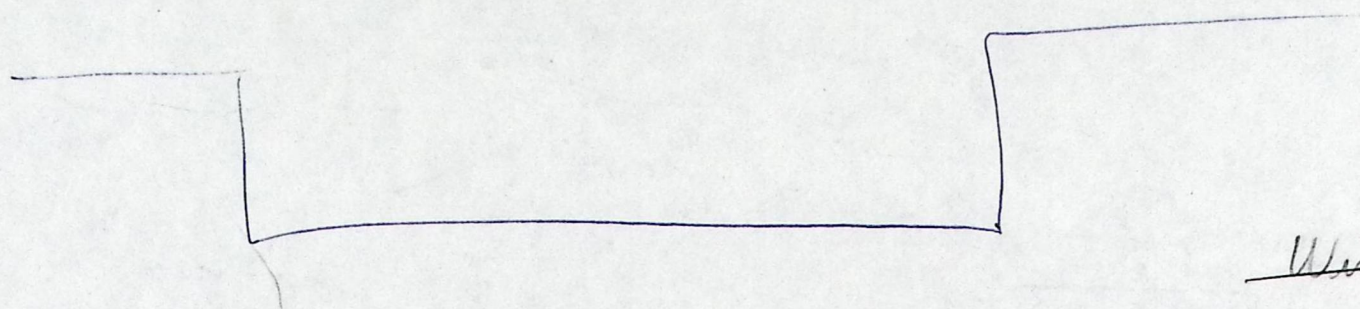
AC Nest J7 Address decode portion
J8 Part?

J1 Mod 5

OBS.



OBS.

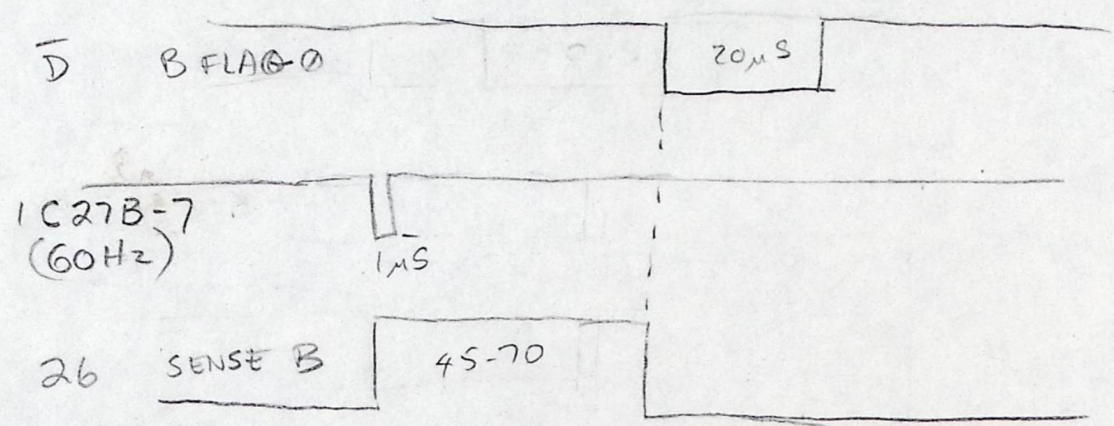


17-25 pin?

~~Wire J7: 1C20-6 to pin 5~~

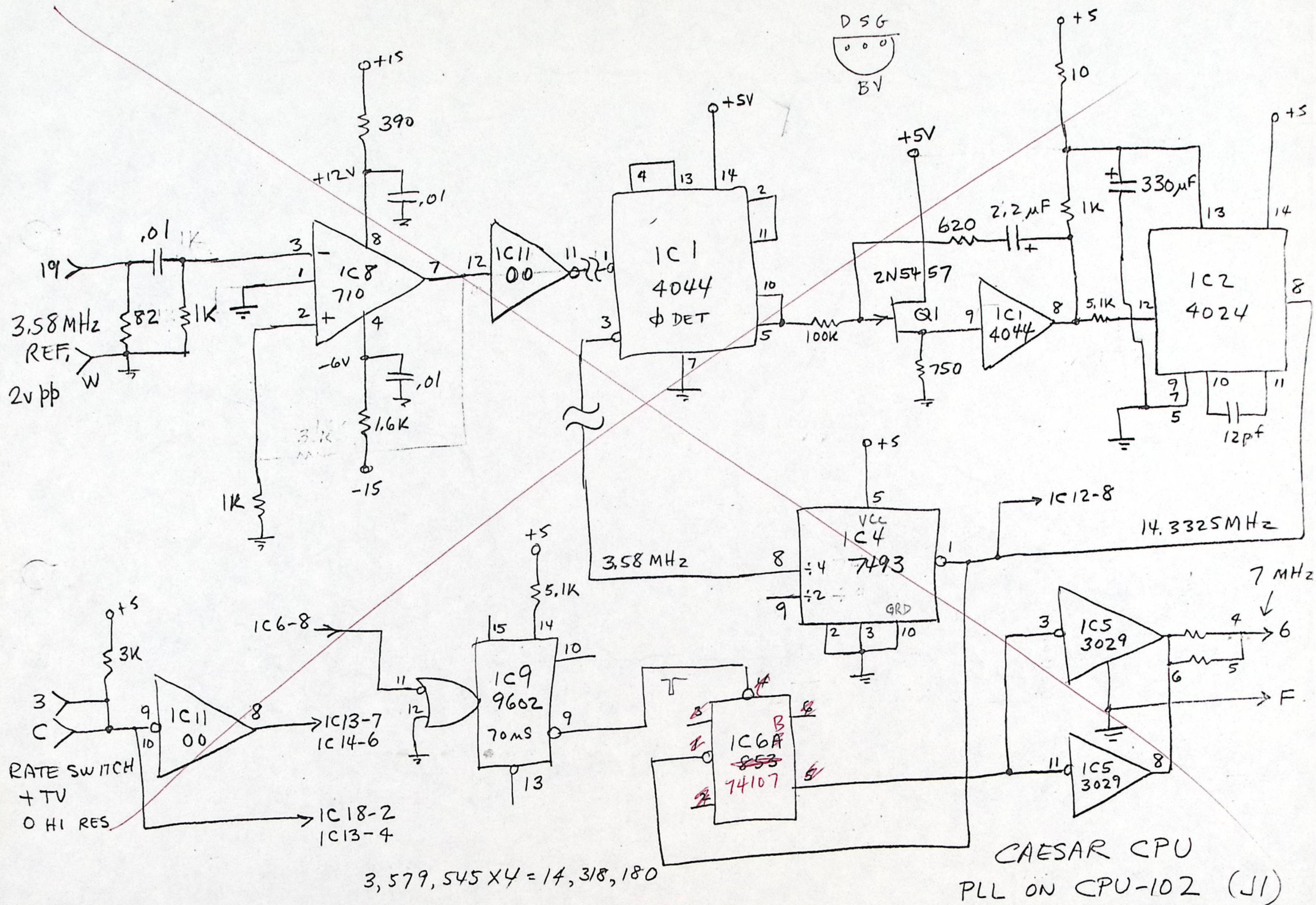
~~Wire next J7-5 to J6-5~~

~~Wire J6: pin 5 to 1C22-2~~

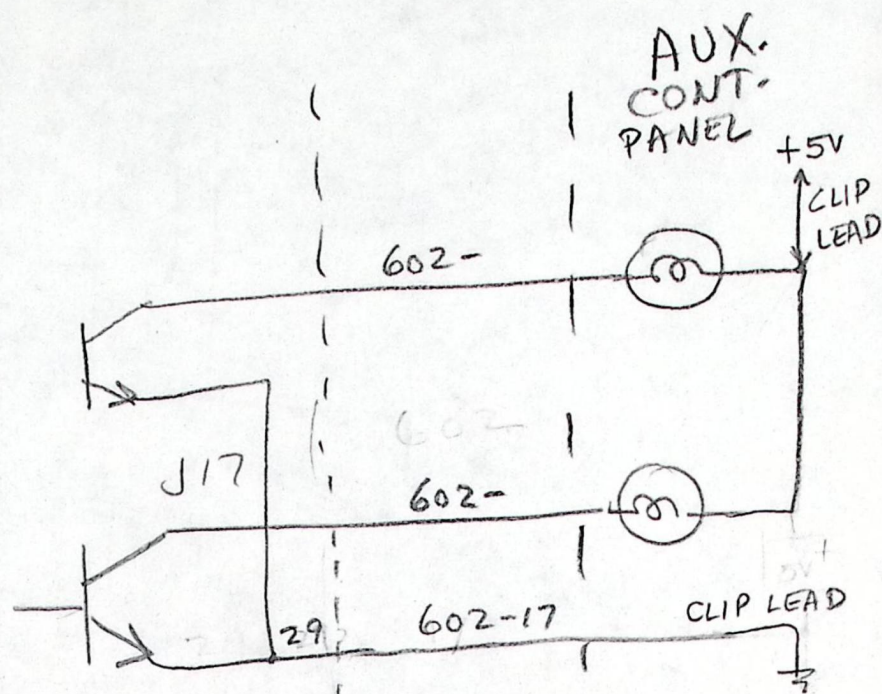


J7
ADDRESS DECODER

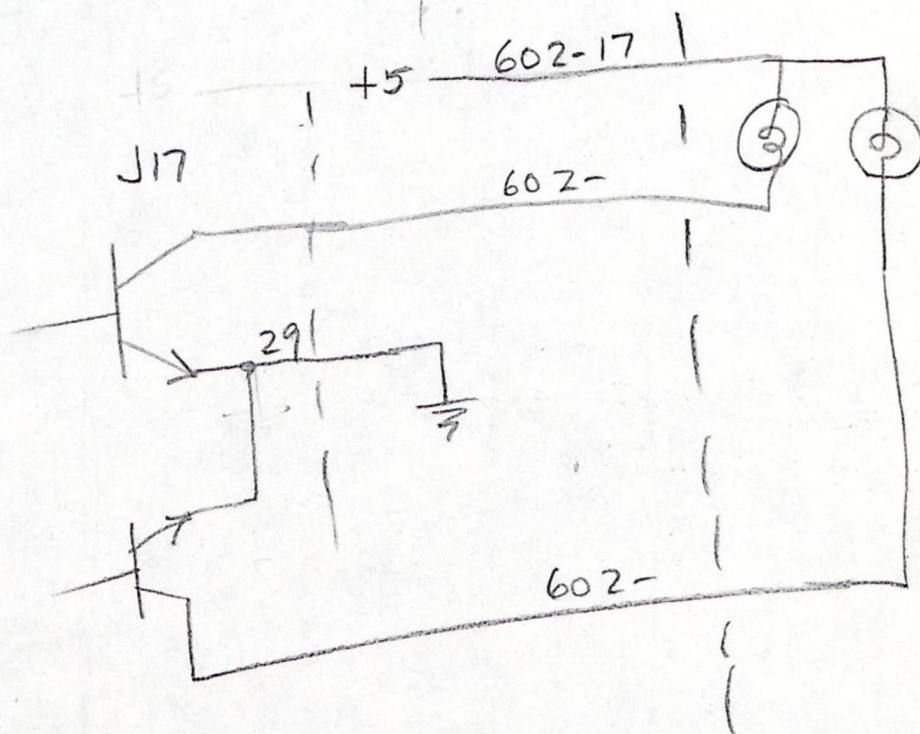
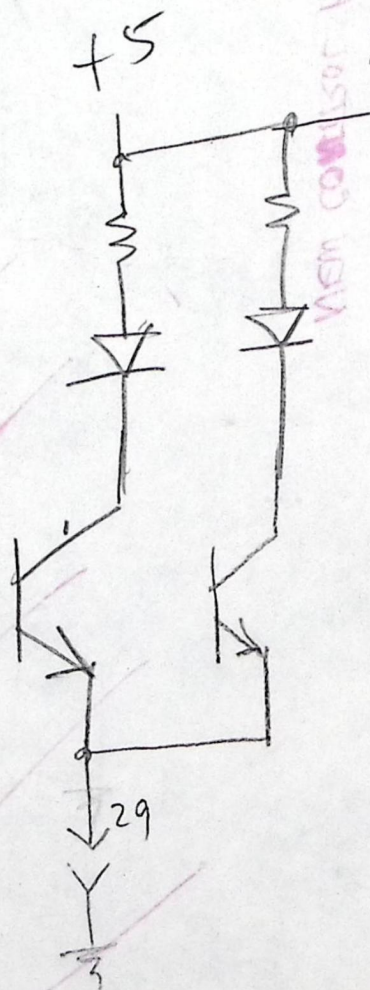
OBS.



OLD



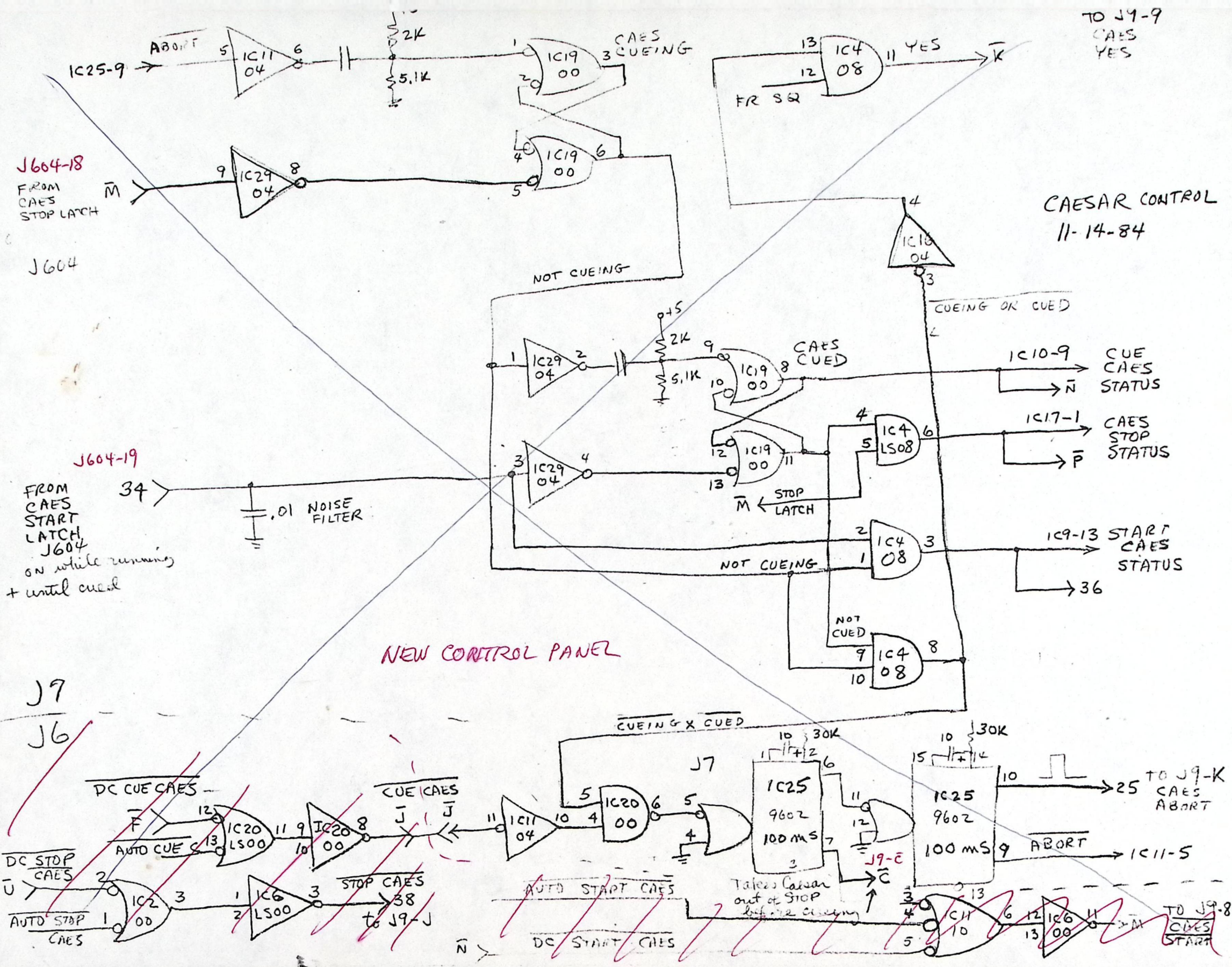
NEW



Auto Cont. Nest:
Remove wire at J17-29; move to +5V bus;
then wire J17-29 to ground bus.

Pt-1002

Pt-1002



J7

IC

1	LS00	X	✓	28	3029	AB	✓
2	LS00	X	✓	29	LS04	ABCDXF	✓
3	LS00	AXXX	✓	30	LS21	X	✓
4	LS08	ABCD	✓	31	LS21	X	✓
5	LS00	ABCD	✓	32A	LS21	X	✓
6	LS08	X	✓	32B	LS21	X	✓
7	LS00	X	✓	33A	LS21	X	✓
8	LS04	X	✓	33B	LS21	X	✓
9	LS00	X	✓	34A	LS21	X	✓
10	LS00	X	✓	34B	LS21	X	✓
11	LS04	ABCXEF	✓				
12	01	XBCD	✓				
13	LS00	X	✓				
14	LS00 37	X	✓				
15	LS00	X	✓				
16	LS04	XBXXXX	✓				
17	LS00	X	✓				
18	LS00	X	✓				
19	LS00	ABCD	✓				
20	LS00	ABXX	✓				
21	LS21	X	✓				
22	LS21	X	✓				
23	LS21	X	✓				
24	LS08	X	✓				
25	9602	AB	✓				
26	RC		✓				
27A	853	A	✓				
27B	9602	AB	✓				

J9

IC

1	LD	28	LS75 X ✓
2	37 ABCX ✓	29	LS20 AX ✓
3	LS04 ABCDEF ✓	30	LS08 XBCD ✓
4	RC	31	339 ABCD
5	LD	32A	LS10 XBC ✓
6	LD	32B	
7	LS00 X ✓	33A	LS05 AXCDXF ✓
8	LD	33B	RELAY
9	LD	34A	RC
10	LS00 ABCD ✓	34B	LS75 A
11	LS10 XXC ✓		
12	RC		
13	LS04 ABCDEF ✓		
14	LD		
15	LS11 ABC ✓		
16	LD		
17	LS20 X ✓		
18	LS08 ABCD ✓		
19	LS00 XBXD ✓		
20	RC ✓		
21	LS00 XBCX ✓		
22	LS00 ABCD ✓		
23	LS10 X ✓		
24	LS08 ABCD ✓		
25	RC		
26	LS75 X ✓		
27A	9602 A		
27B			

Scan J6 → J9 → J603

Caes. J6 → J7 → J9 → J604

Audio J6 → J9 → TB4

Syp 4 J6 → J9 → J605

New Audio-Visual Resources
For Teacher Education
Available from the Synod Office

What Do You Think? - a 32 minute sound color film produced by the Board of Christian Education. Through interviews by Dr. David Elkind the religious concepts of children from four to eleven years of age and the three distinct stages of mental development are portrayed.

Teaching And Learning: Grades 1-2

Teaching And Learning: Grades 3-4

Teaching And Learning: Grades 5-6

Teaching And Learning: Grades 7-8

Four, 20 minutes each, color films expose teachers directly to real church school classes, taught by volunteer teachers who are skilled at employing the new teaching by inquiry and exploration strategies. The accompanying guides explain the many different teaching skills shown in the films.

Inductive Learning - an Argus Communications kit consisting of a 7 minute color filmstrip and tape, an instructor's manual, a unique game, and a "mystery box." This kit enables teachers to see the difference between the deductive and the inductive approach.

Change and the Generation Gap - an Argus Communications kit with a 7 minute color filmstrip and tape, an instructor's manual, and a change-o-meter. What are your feelings about change? What constitutes real values? What process is required to personalize and internalize values?

Group Dynamics - an Argus Communications kit with a 7 minute color filmstrip and tape, an instructor's manual, and instruments for a self-study, an appraisal of your classroom situation, and a teacher portrait.

The Dynamics of Group Discussion - a 32 page booklet and a tape to guide the teacher to involve the total group and to avoid pitfalls in directing a discussion.

Interaction - a 19 minute tape and three transparencies which support the discussion of teacher-student talk in the classroom by Dr. Larry Stevens of Arizona State University. An exercise sheet to use with the transparencies is included.

Educational Objectives - a VIMCET Associates filmstrip and tape program with an exercise sheet to develop a teacher's ability to identify and write behavioral objectives.

Selecting Appropriate Educational Objectives - a VIMCET Associates filmstrip and tape program with an exercise sheet to enable a teacher to distinguish correctly cognitive, affective, and psychomotor objectives and to write cognitive objectives of the higher level.

Identifying Affective Objectives - a VIMCET Associates filmstrip and tape program with an exercise sheet to enable a teacher to identify and to write measurable affective objectives.

Evaluation - a VIMCET Associates filmstrip and tape program with an exercise sheet to enable a teacher to measure a given objective.

ADD TO YOUR SYNOD A-V CATALOG
Available free from the Synod Office

(June 1971)

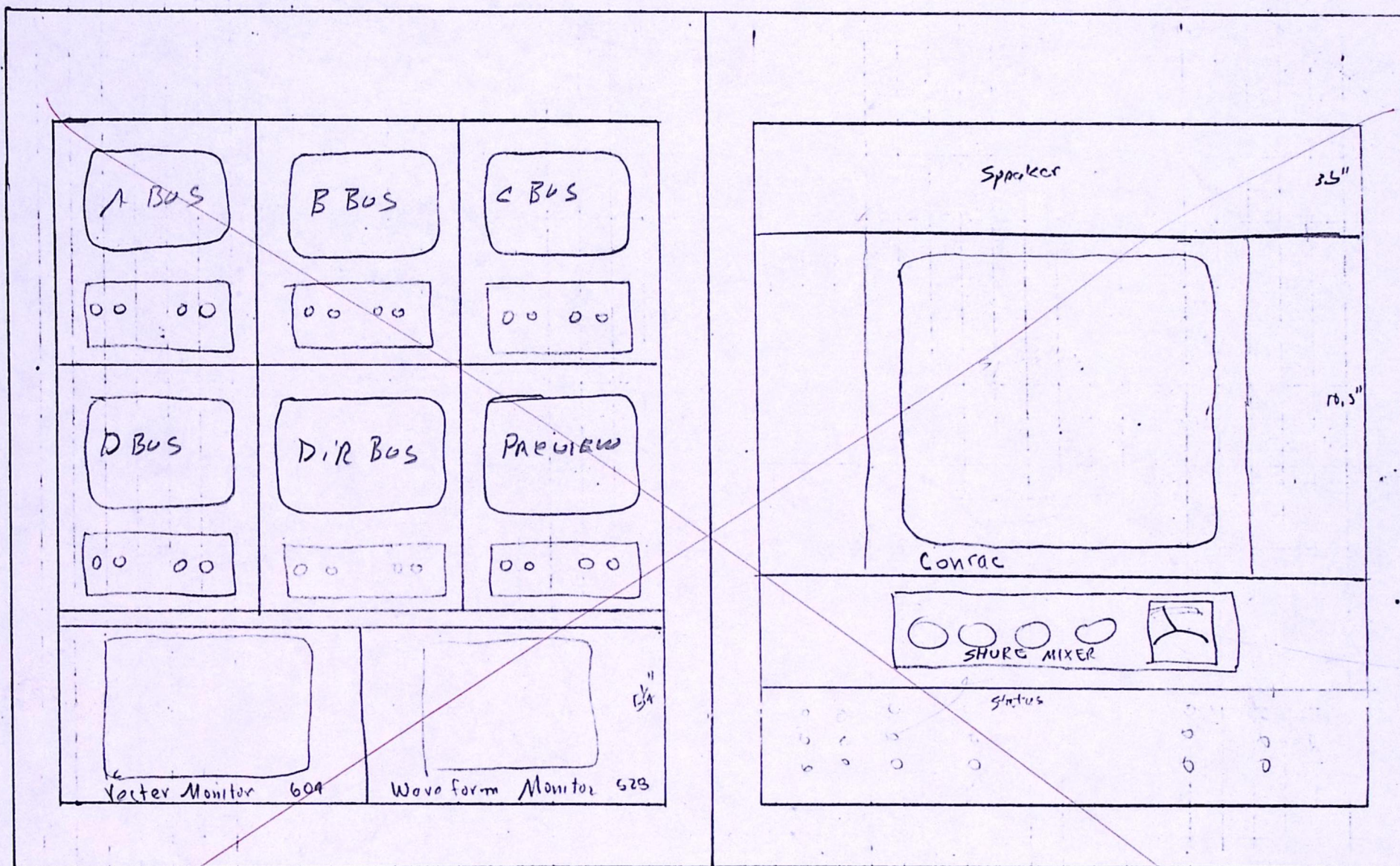
+5V

NC
J701-48
Cont Rm J601-47, 48
J8

Cont Rm { J702
J602-47, 48
J17

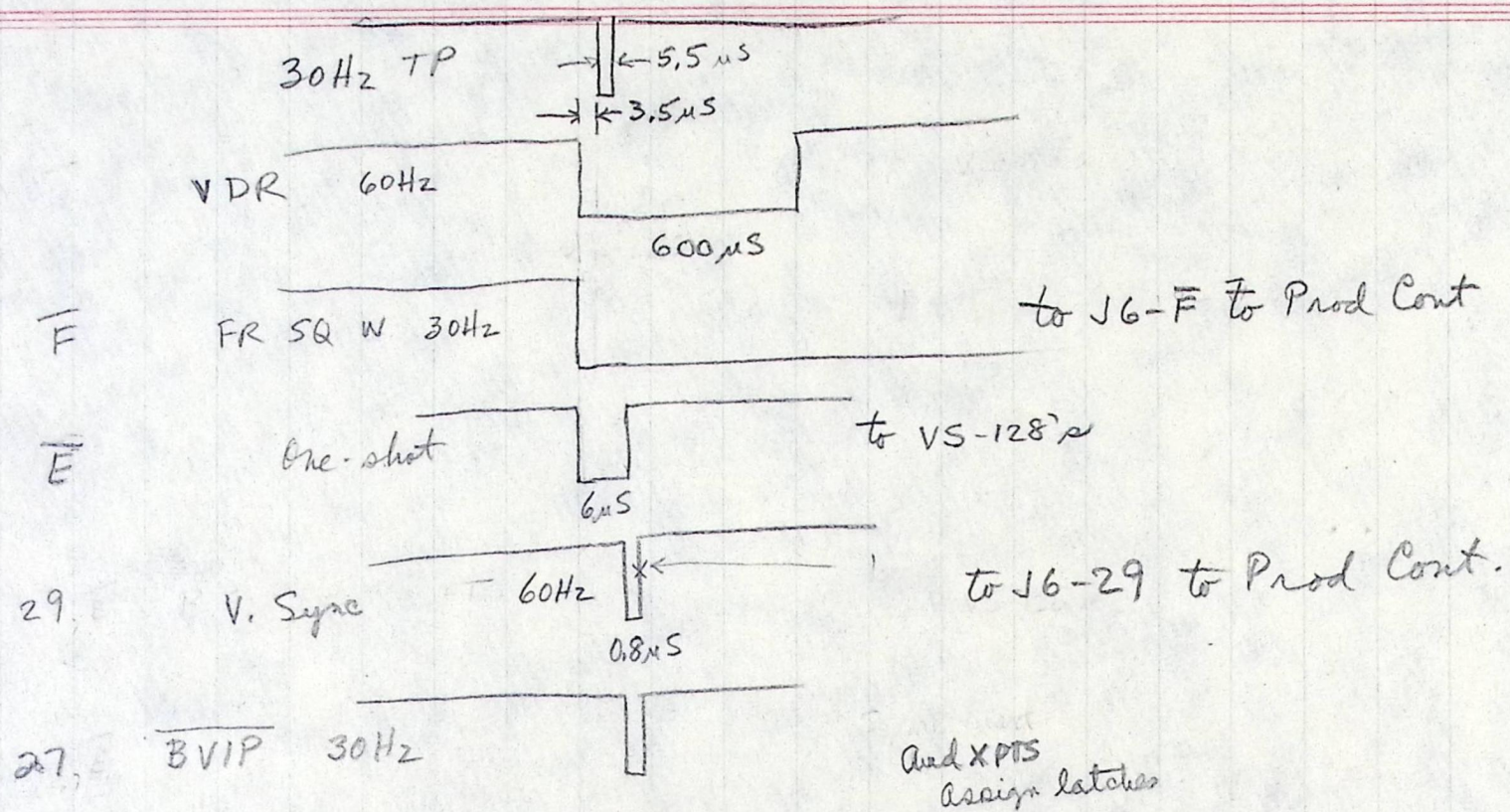
5101-A
J101-47
Scan J603-47, 48
J19

NC
Caes. { J101-47, 48
J604-47, 48
J18

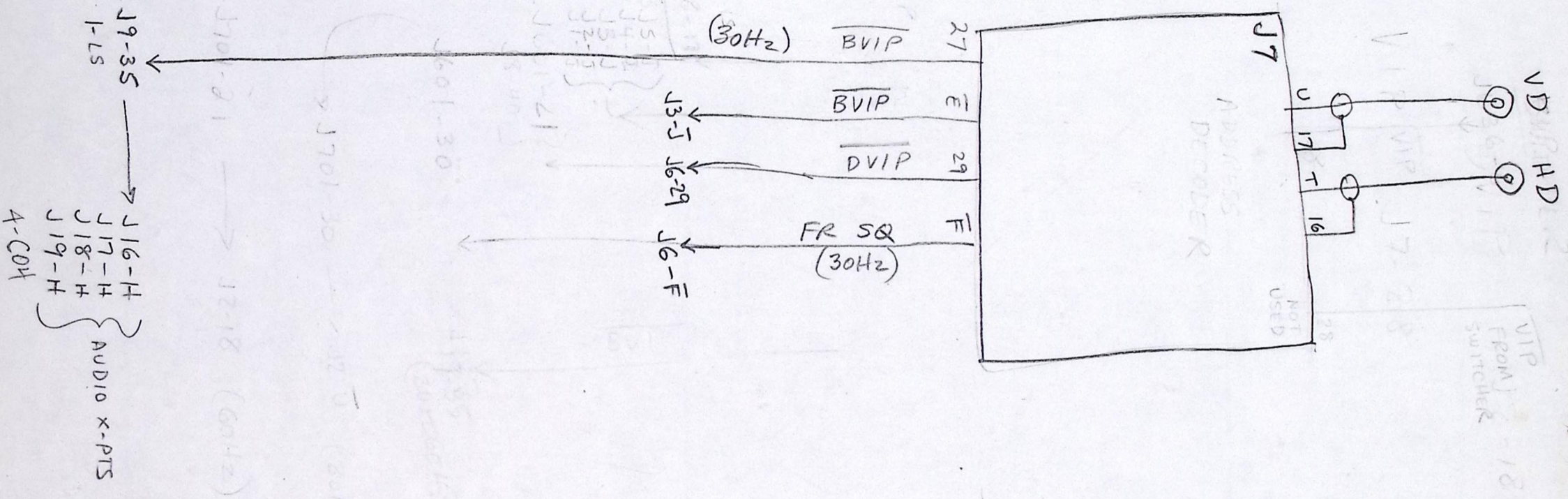


Need to add fans & holes for air flow

Console Racks



VERT. TIMING



TYPES TL080 THRU TL084, TL080A THRU TL084A, TL081B, TL082B, TL084B JFET-INPUT OPERATIONAL AMPLIFIERS

operating characteristics, $V_{CC} = \pm 15 \text{ V}$, $T_A = 25^\circ \text{C}$

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
SF Slew rate at unity gain	$V_I = 10 \text{ V}$, $C_L = 100 \text{ pF}$, $R_L = 2 \text{ k}\Omega$, See Figure 1		12		$\text{V}/\mu\text{s}$
t_r Rise time	$V_I = 20 \text{ mV}$, $R_L = 2 \text{ k}\Omega$, See Figure 1		0.1		μs
Overshoot factor	$C_L = 100 \text{ pF}$, See Figure 1		10%		

PARAMETER MEASUREMENT INFORMATION

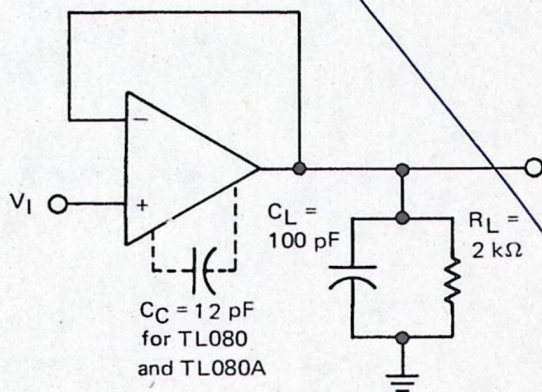


FIGURE 1—UNITY-GAIN AMPLIFIER

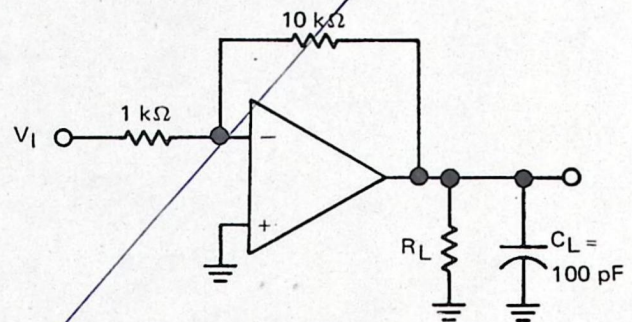


FIGURE 2—GAIN-OF-10 INVERTING AMPLIFIER

INPUT OFFSET VOLTAGE NULL CIRCUITS

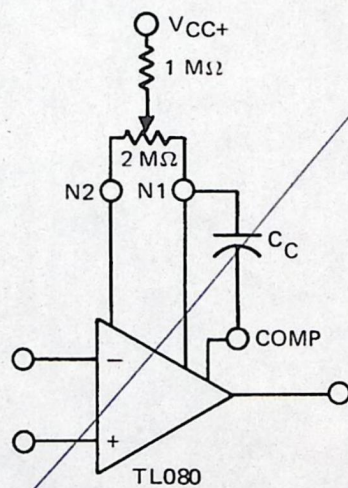


FIGURE 3

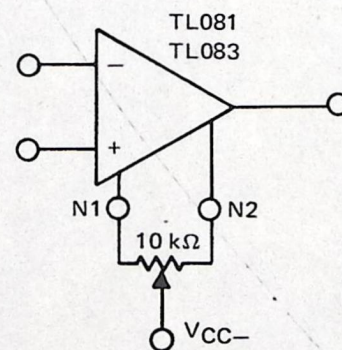


FIGURE 4

Caesar

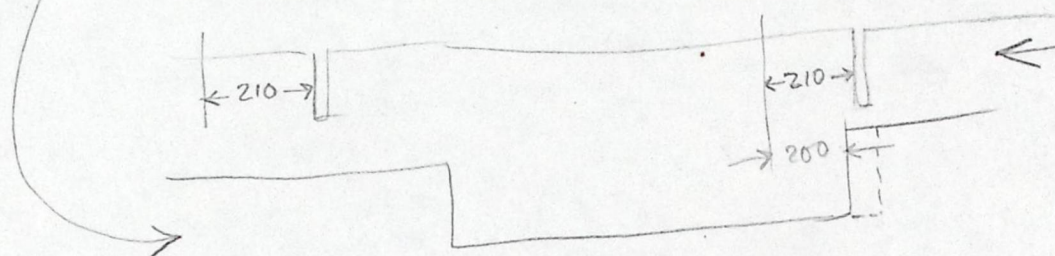
Color Cont: V Reset delayed 210 μ S from V Dr., ends 740 μ S after V Dr start

Director: V Reset used for 60 Hz clock

SC/MP Start Pulse:

Starts: 690-720 μ S after V Drive start

Ends: 200-240 μ S after V Drive start



Solution:

Wire V Drive (TTL) to J30 in Col Cont.

~~J1-2 to J19-7, J12-4~~ J1-4 to J30

Cable Col Cont J30 to Director instead of V Reset
from J35 looped thru SC Camera Control

J10

✓ 25
C
✓ 26
✓ D
✓ 27
✓ E
✓ 28
✓ F
✓ 29
✓ H
30

Y

J606

26
27
28
29
30
31
32
33
34
35
36

16

20

24

22

TO VTR #3

SIG

(3) Cued ✓
Redy Mode ✓
(3) IN AUTO ✓
3 VTRS
3 PLAY ✓
SVTR3 ✓
STOP 3 ✓
STRE3 ✓
Q VTR 3 ✓
STPE 3 ✓

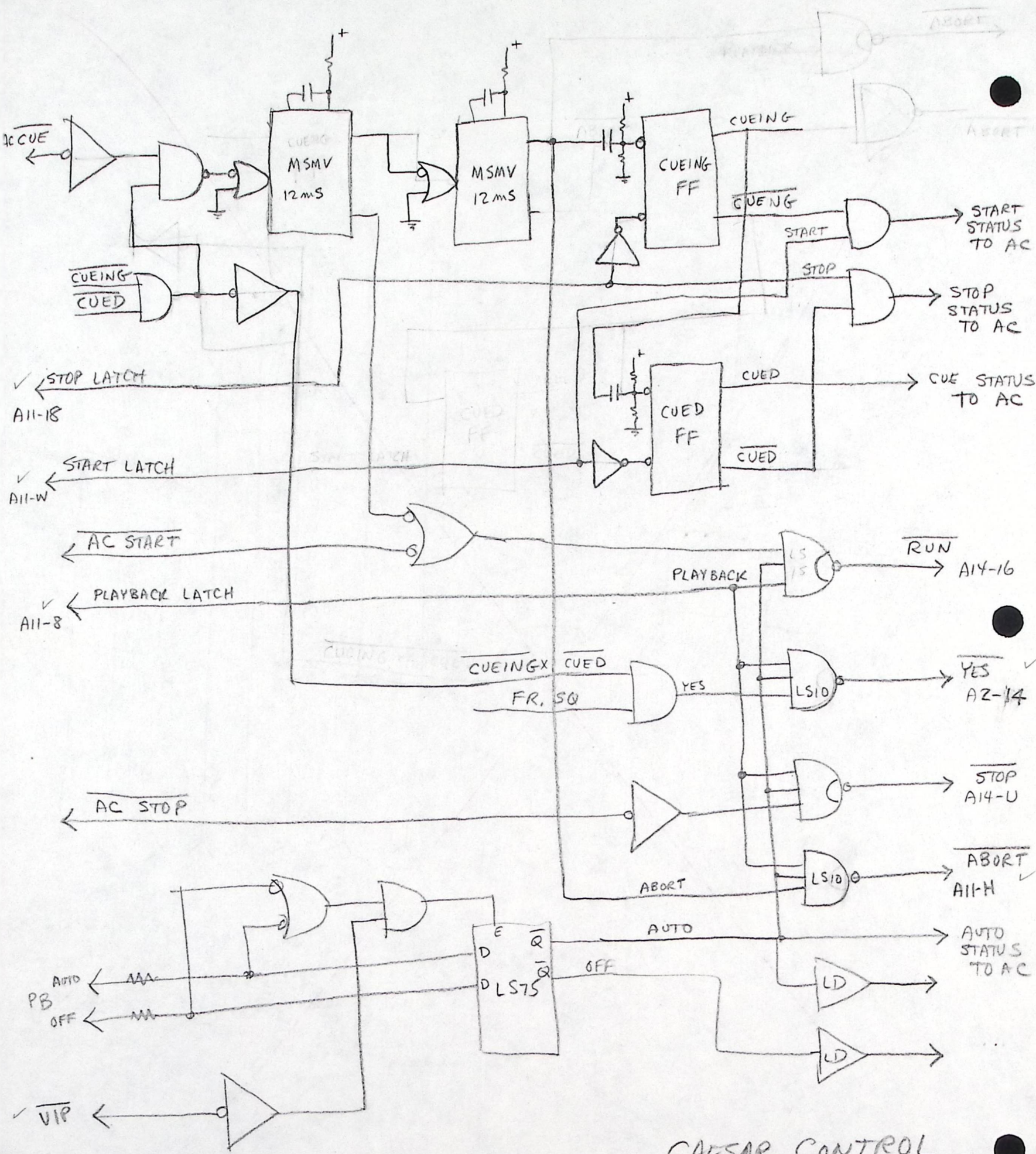
D

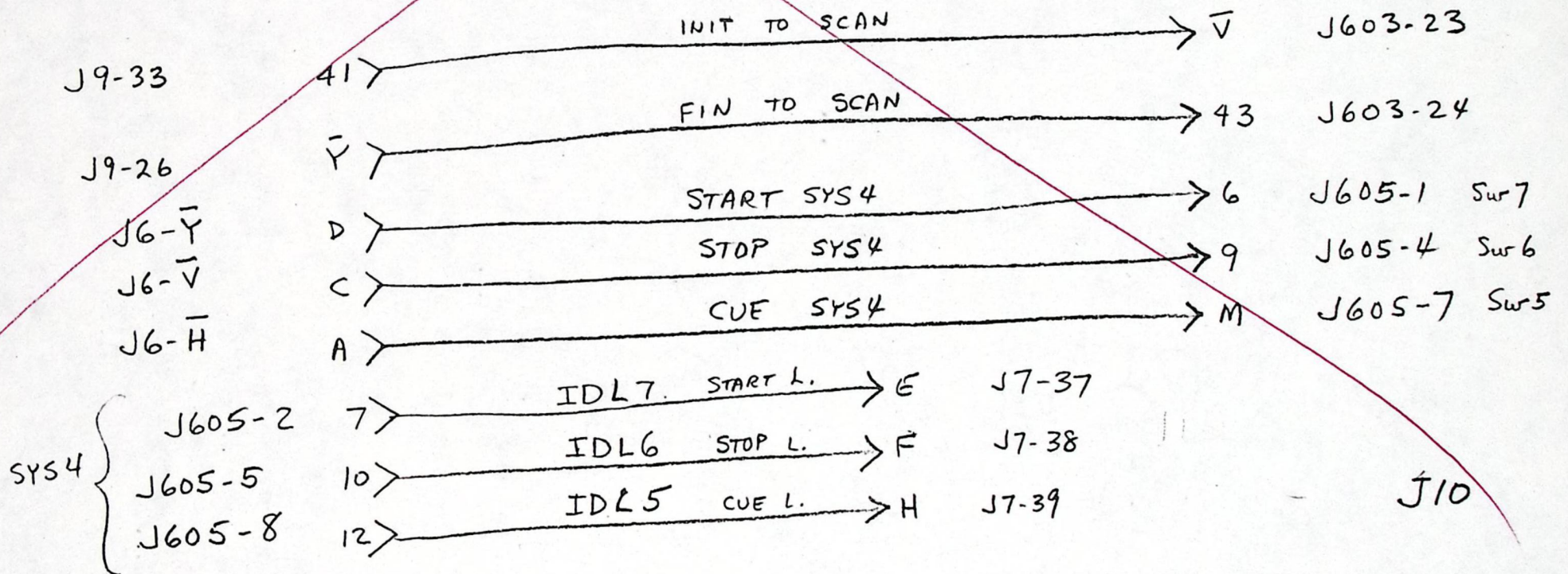
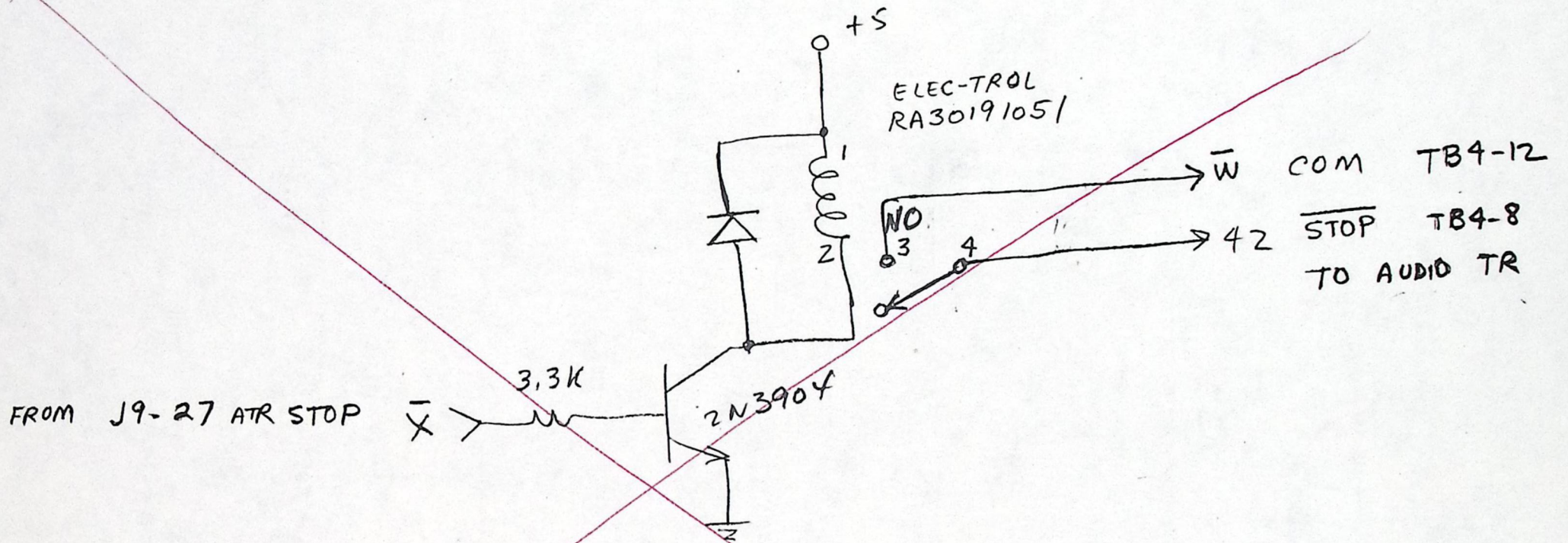
3 Redy

Gnd

3 IN AUTO

3 AUTO VIR P.B.





Caes to AC

J604 Stop Latch J7-M
Start Latch J7-34
Playback Latch J9-10

AC to Caes.

J604 Run J9-11
Abort J9-M
Yes J9-12
Stop J9-N

Caes to AC

Start Status
Stop Status
Cue Status
Auto Status

AC to Caes

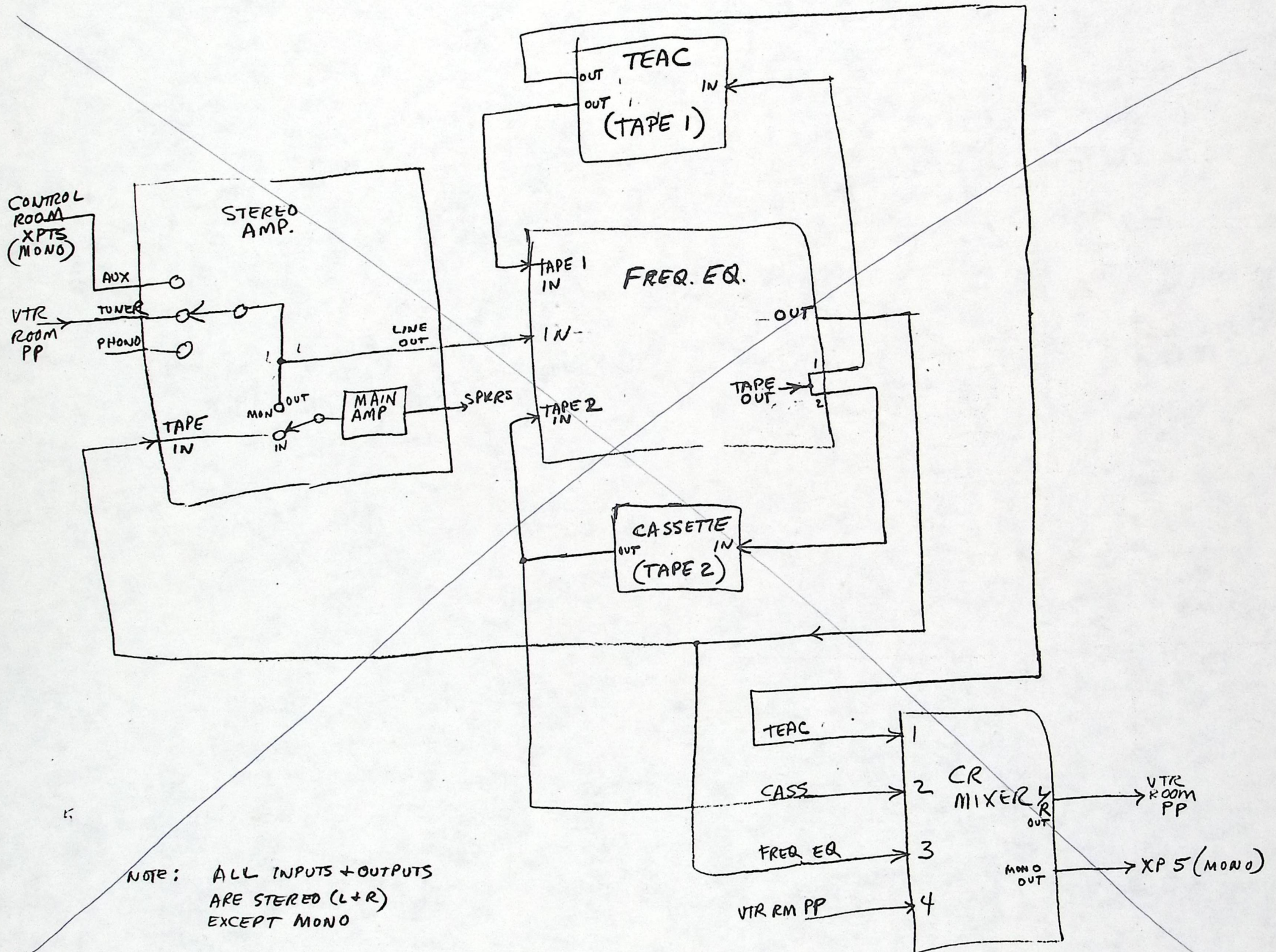
Start
Stop
Cue

1- 9602
1- LS75
2- LS00 7
2- LS08 5
2- LS10 4
1- LS04 4
1- LS05 2
1- LD

1- 9602
1- LS00
2- LS08
1- LS04
2 { diff 4
{ shot 2

X-200 PCB

Part



PROPOSED 8-17-84

Move Caesar Control Logic ^{on J6+7} to Caesar Director

1. Reduces J6+7 to Computer logic only so that they can be removed when changing over to new Controller
2. Simplifies changeover to CAECON

Move Caesar Control logic on J6+7 to J9

1. Same as 1 above.

CASAR REMOTE CUEING FROM SC/MP:

Cue before end-of-playback

1. ABORT
2. YES

Cue after end-of-playback

1. Rewind before Abort sets FF,
which inhibits ABORT from SC/MP
2. YES from SC/MP
3. START resets FF

Rewind at Tape Controller after playback of a scene
is SRC (Synchr. Reverse Command)

Logic diag 5 - J102-M, T

also BSR (BackSpace 1 Record)

Logic diag 2 - W1-9

Wired to Director Next AJ11-17
three twisted pair.

CASR REMOTE CUEING FROM SC/MP:

Cue before end-of-playback

1. ABORT
2. YES

Cue after end-of-playback

1. Rewind before Abort sets FF,
which inhibits ABORT from SC/MP
2. YES from SC/MP
3. START resets FF

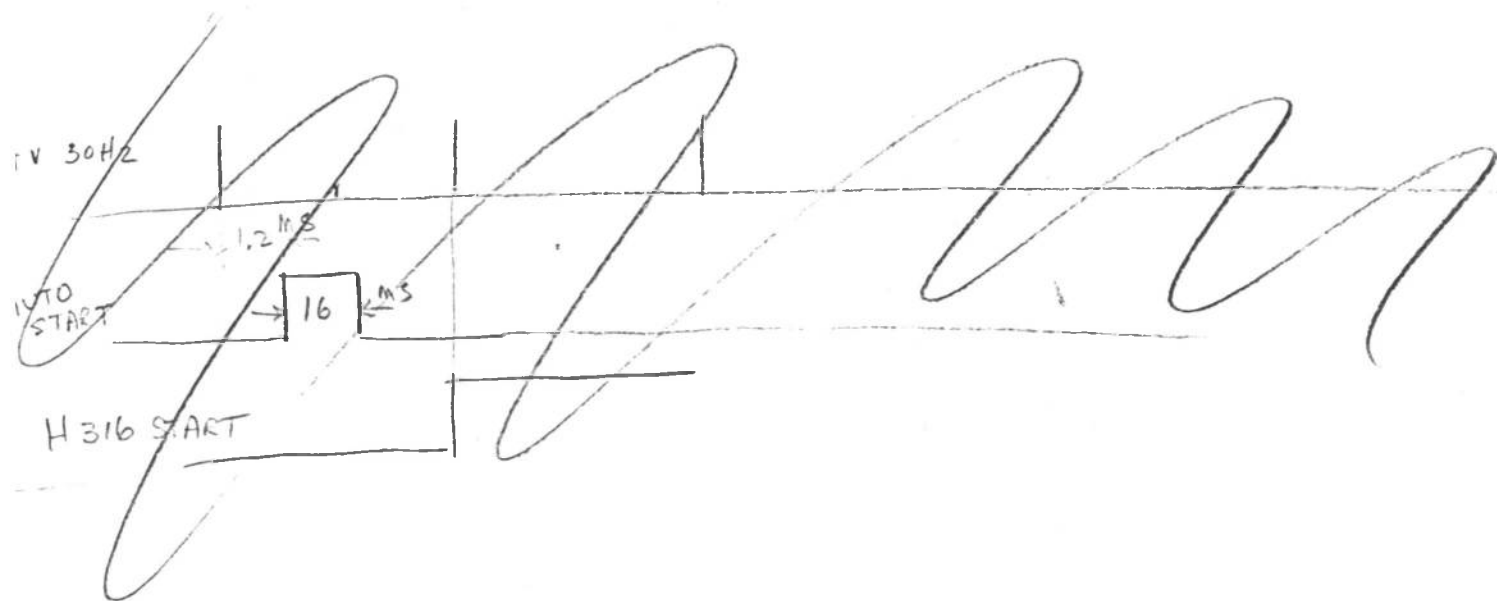
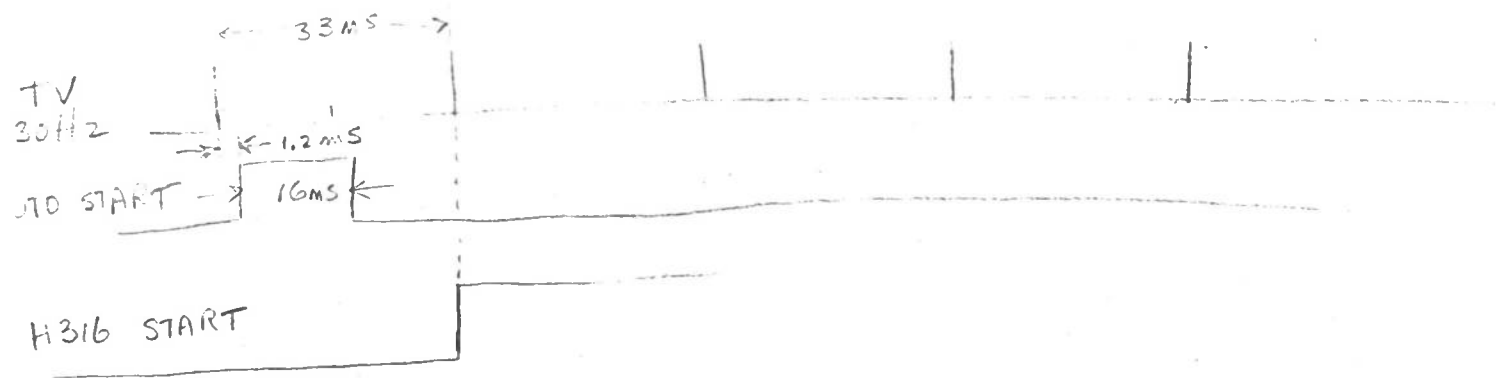
Rewind at Tape Controller after playback of a scene
is SRC (Synchr. Reverse Command)

Logic diag 5 - J102-M, T

Also BSR (BackSpace 1 Record)

Logic diag 2 - (W1-9)

Wired to Director Next AJ11-17
three twisted pair.



H316 Playback starts at next 30Hz* pulse after Start p.b. or Start from Auto Control.

* 30Hz may be either TV 30Hz or CPU 30Hz depending on whether TV LOCK is ON.

TV 30Hz CPU → color DAC

CPU 30Hz Comp. Interface BJ13-6

VTR START

J8-33

NEXT 30Hz CLOCK

J8-17

START SCMP

COUNT N FRAMES

SC/MP Cease Run

J6-M

J9-8

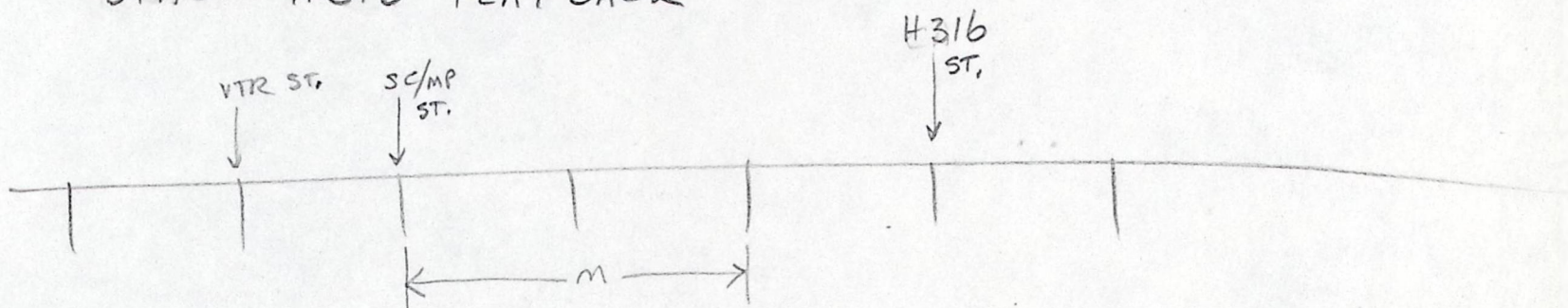
J9 Relay

J9-11

} 0.5 ms delay

NEXT 30Hz CLOCK

START H316 PLAYBACK



Field Switches

Caesar CPU J3

→ UP IC3-9 NEW
→ DN IC3 8 OLD

✓	✓	✓	✓
✓	✓		
✓		✓	
✓	✓		✓
↑	OK	OK	NG
			NG

Auto Control nest J7

→ UP OLD No switch (wired)
DN NEW

COMPUTER IMAGE

CONNECTOR WIRING LIST

DRAWING NUMBER AUTOMATION CONTROL

CABLE DESIGNATION INTERCOM CHASSIS, STUDIO, SONY

CONNECTOR NUMBER T84

REV	DATE
SHEET	OF
PAGE	OF

PIN	SIGNAL	FROM	TO	SIZE	WIRE TYPE	COLOR
1	BEEP	J6-20				
2	GROUND	J6-21				
3	PAN LEFT	J6-31				
4	PAN RIGHT	J6-33				
5						
6						
7	STUDIO GROUND	J6-Y				
8	D1	J10-42				
9	D2	J10-W				
10	D3	J9-32				
11	D7	J9-L				
12	5-6D		J9-P			
13						
14						
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50						

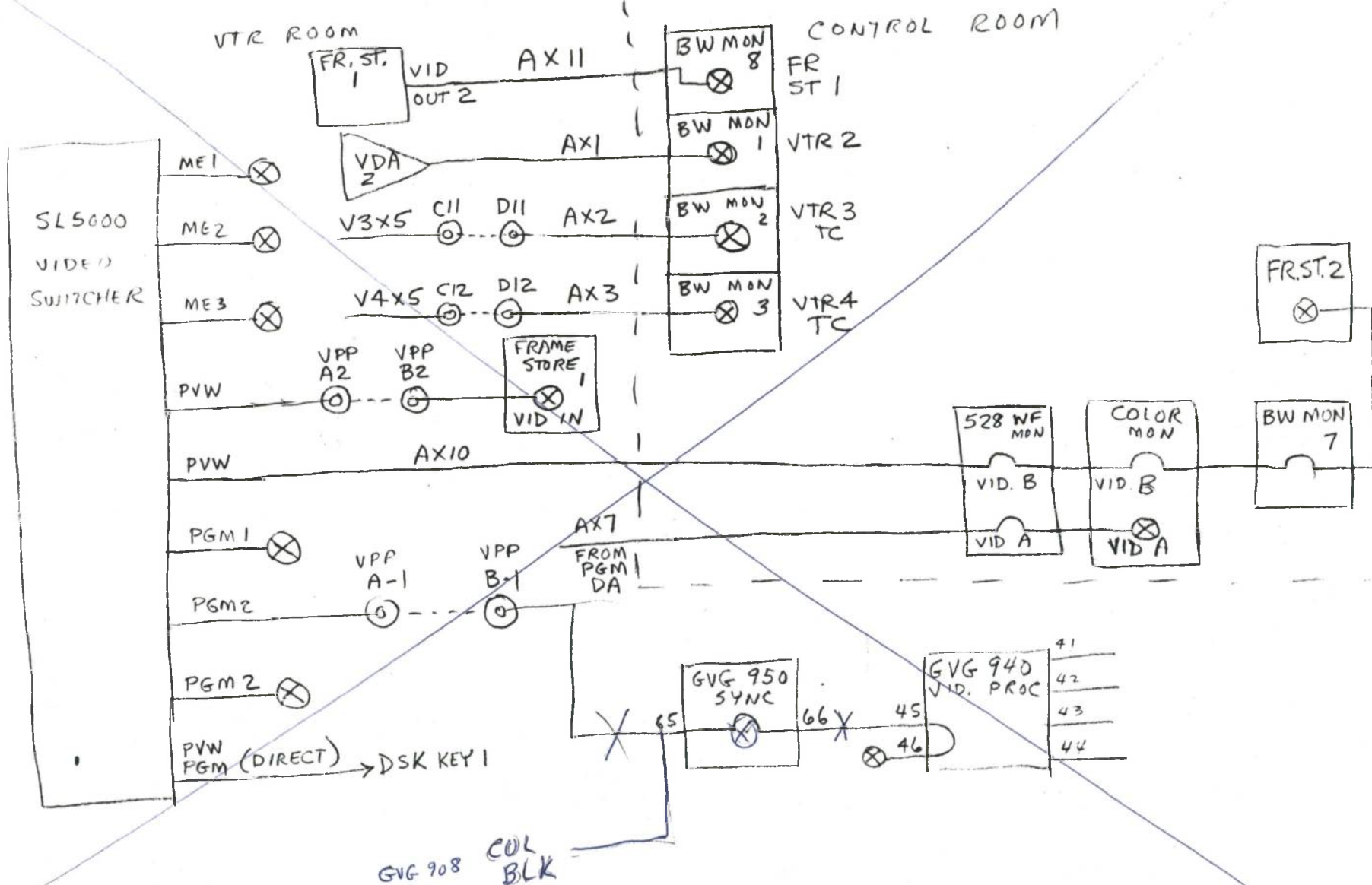
YTR 20912
 " " "
 CONT ASS
 " " "
 " " "

NOTE: ALL WIRE # 24 STRANDED

UNLESS OTHERWISE SPECIFIED.

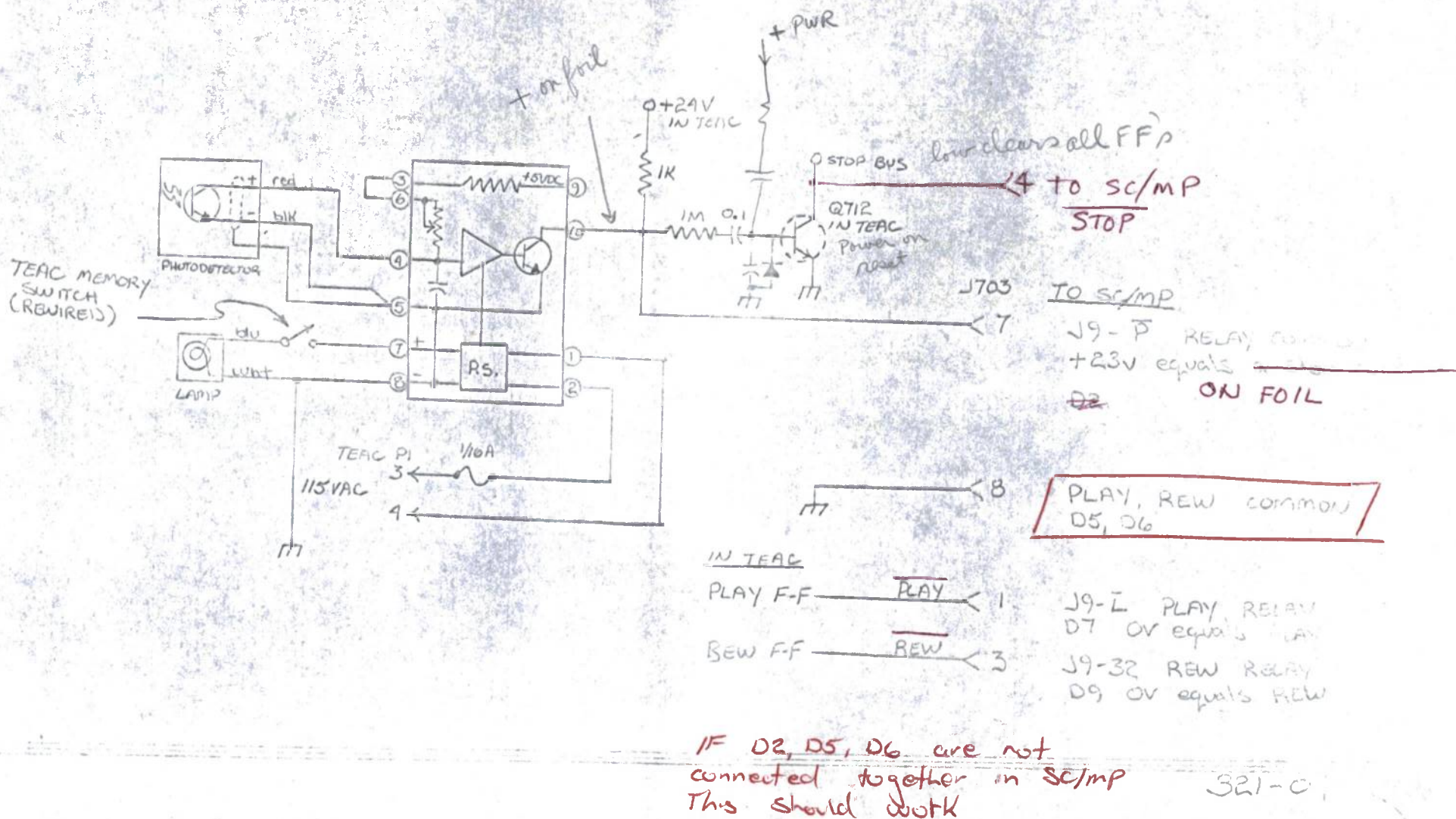
TEAC ATR

1. No lights lit when you hit PLAY on ATR. Can't cue with SC/MP.
2. When cued on foil, can not cue to previous cue fail
3. Sometimes misses foil, ^(doesn't stop) when cueing in forward ^(play) mode after rewind.



SWITCHER OUTPUT VIDEO DISTRIB.

6-25-84



	ME1		ME2		ME3	
	UP	DOWN	UP	DOWN	UP	DOWN
NORM						
A in	4.04	.009	4.02	.010	4.00	.012
B in	.011	4.04	.011	4.07	.013	4.02
Out to AD	.012	4.04	.012	4.07	.011	4.02
~~DAC in~~	~~.004~~		~~.001~~		~~.011~~	
A out	4.04	.011	4.02	.010	4.00	.010
B out	.009	4.04	.013	4.07	.007	4.02

IMMED

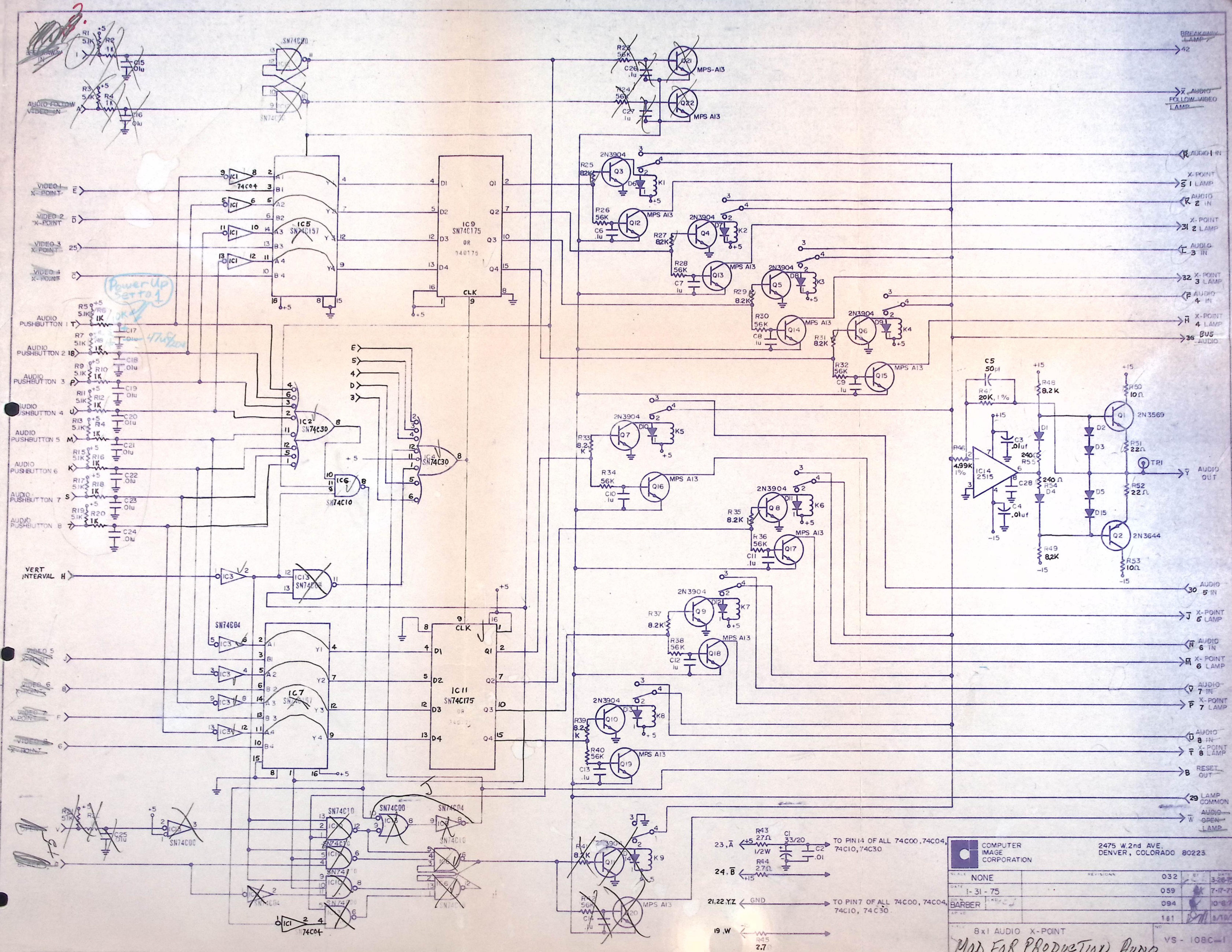
~~A in~~						
~~B in~~						
~~Out to AD~~						
~~DA in~~						
A out	3.90	-1.122	3.91	-1.141	3.88	-1.08
B out	.014	4.04	.017	4.06	.021	4.01

AUTO

~~A in~~						
~~B in~~						
~~Out to AD~~						
DA in	.004	3.90	.001	3.90	.010	3.90
A out	3.91	.016	3.92	.023	3.89	.007
B out	.001	3.90	.003	3.90	.008	3.90

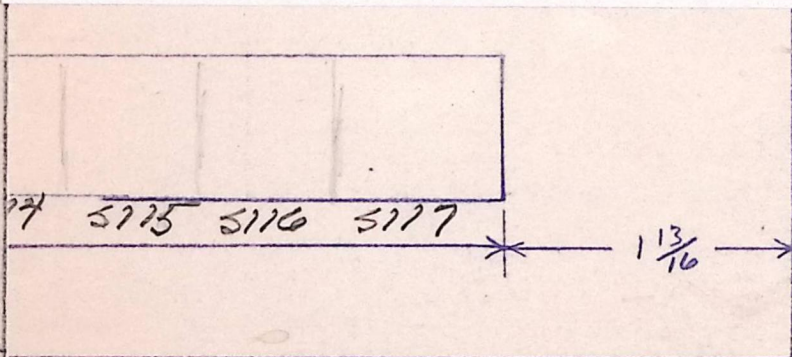
AUX, CONTROL PANEL ~~1602~~

Switches		~~Lamps~~	LAMPs	
SWR KEYS	B/DIR	702-40	636-49	—
	D/DIR	702-41	636-50	—
	C/ME2	702-38	636-42	—
	SPARE	702-30	—	—
AUTO CONT ENABLE	ME1	702-42	3-L	—
	ME2	702-43	3-33	—
	ME3	702-44	3-M	—
	DSK	702-45	3-34	—
	DSF	702-46	3-N	—
	FZ1	702-39	7-30	—
	FZ2	702-37	9-H	—
	AUD	702-32	9-43	—
	SPARE	702-33	—	—
	SCAN	—	SCAN	702-25 9-5 ✓
AUDIO	CAES	—	CAES	702-21 9-5 ✓
	SYS4	—	SYS4	702-20 9-4 ✓
	XPT 1	702-1	AUD XPT 1	702-9 17-5 ✓
	2	702-2	2	702-10 17-31 ✓
	3	702-3	3	702-11 17-32 ✓
	4	702-4	4	702-12 17-H ✓
	5	702-5	5	702-13 17-J ✓
	6	702-6	6	702-14 17-M ✓
	7	702-7	7	702-15 17-P ✓
	8	702-8	8	702-16 17-T ✓
	GND (SW. Com)	702-49,50	LAMP COM	702-17 17-29 ✓
			SCAN (SP1) CUED	702-18 9-6
			CAES (SP2) CUED	702-19 9-3
			SYS4 (SP3) CUED	702-22 9-27

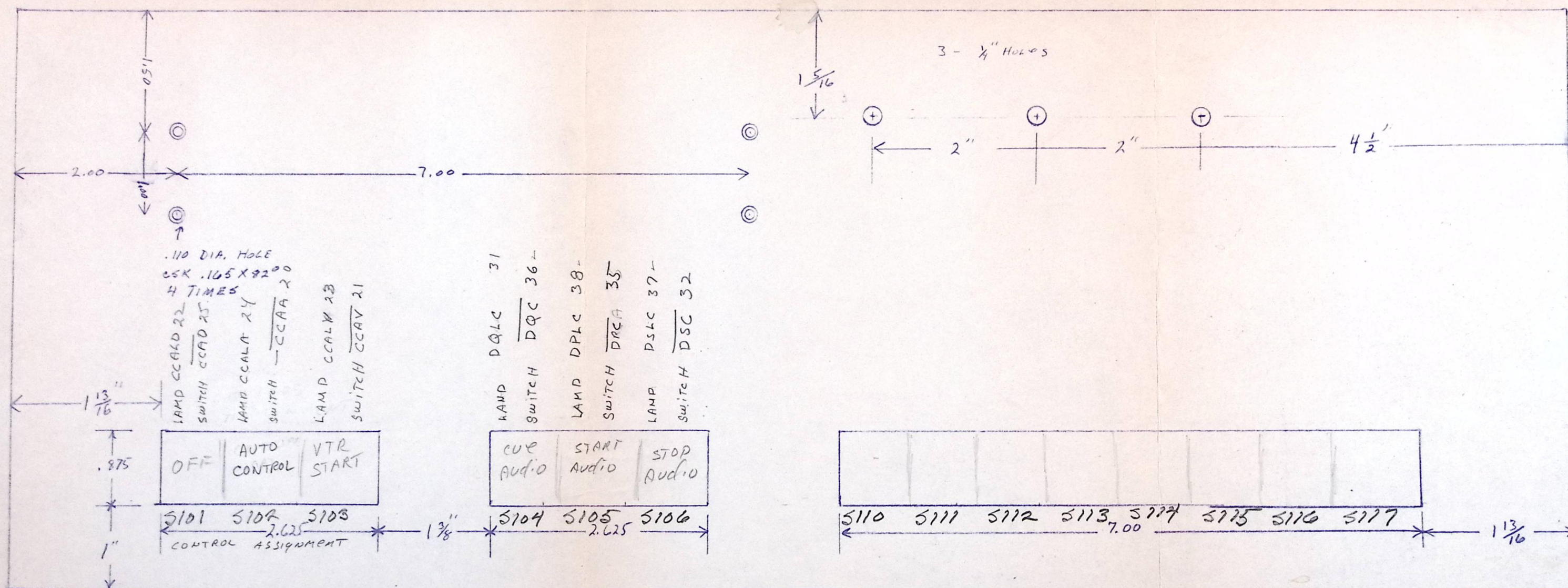


		COMPUTER IMAGE CORPORATION		2475 W.2nd AVE. DENVER, COLORADO 80223	
SCALE	NONE	REVISION	032	BY	3-26-75
DATE	1-31-75		059		7-17-75
BY	BARBER		094		10-8-75
DATE			181		11-10-75
8x1 AUDIO X-POINT		VS-108C-1			
MOD FOR PRODUCTION AUDIO					

CAESAR
Remote Panel



CARSTAR Remote Panel



68-350 = 11 OH
 67-350 = 3 OH
 65-150-3 = 2 (10H 3-1) OH
 65-150-8 = 1 (2-4) OH
 L53-2W = 8 0
 L53-26 = 3 0
 L53-2R = 3 0
 L153-1 = 14 0
 LAX INSERT = 14 OH

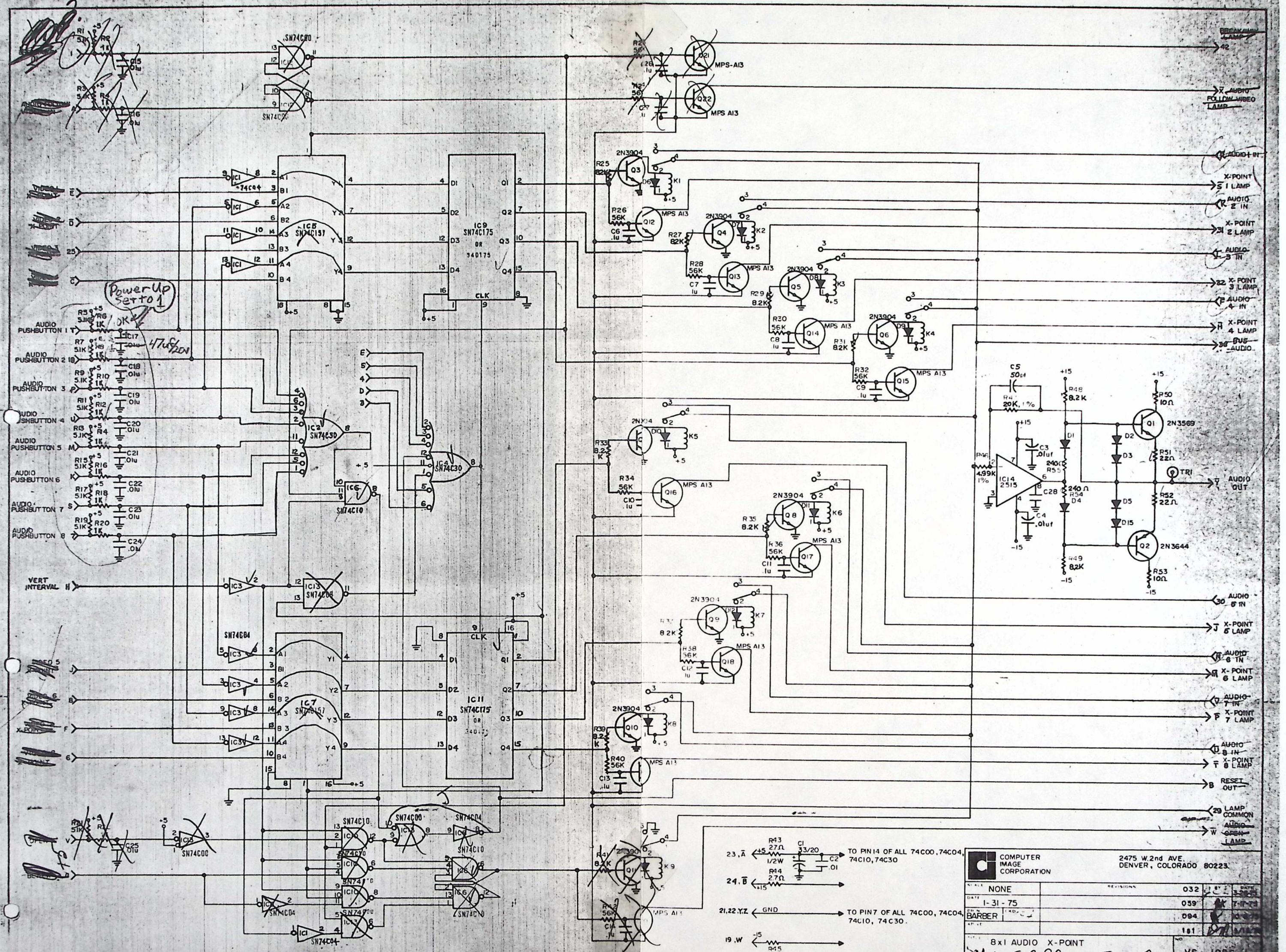
SCAW

9 cond

C = STATUS

A = FINAL

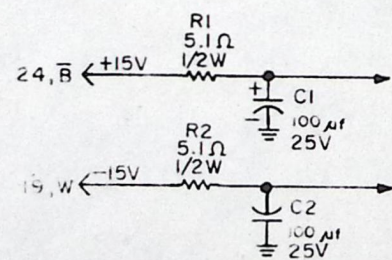
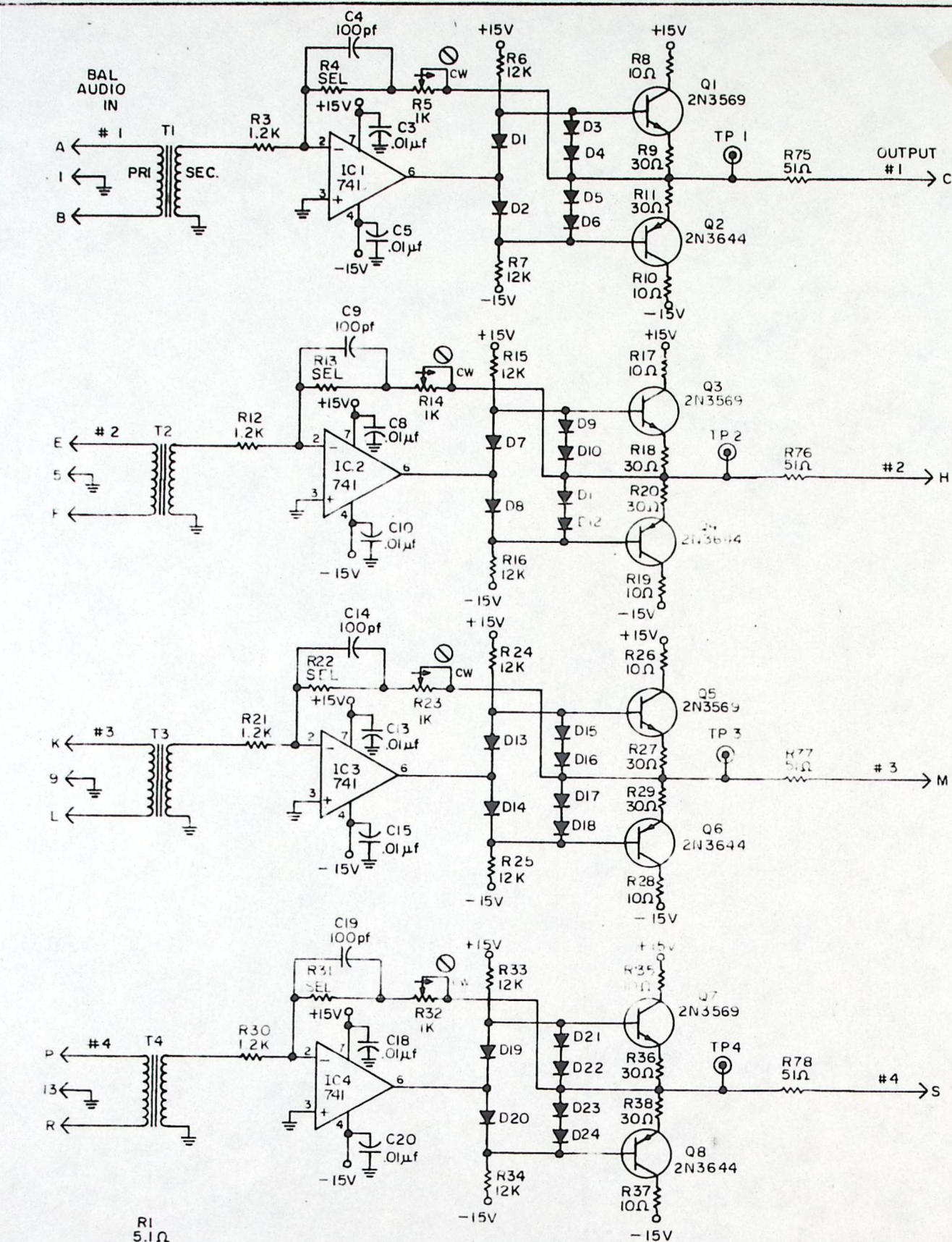
B = INITIAL



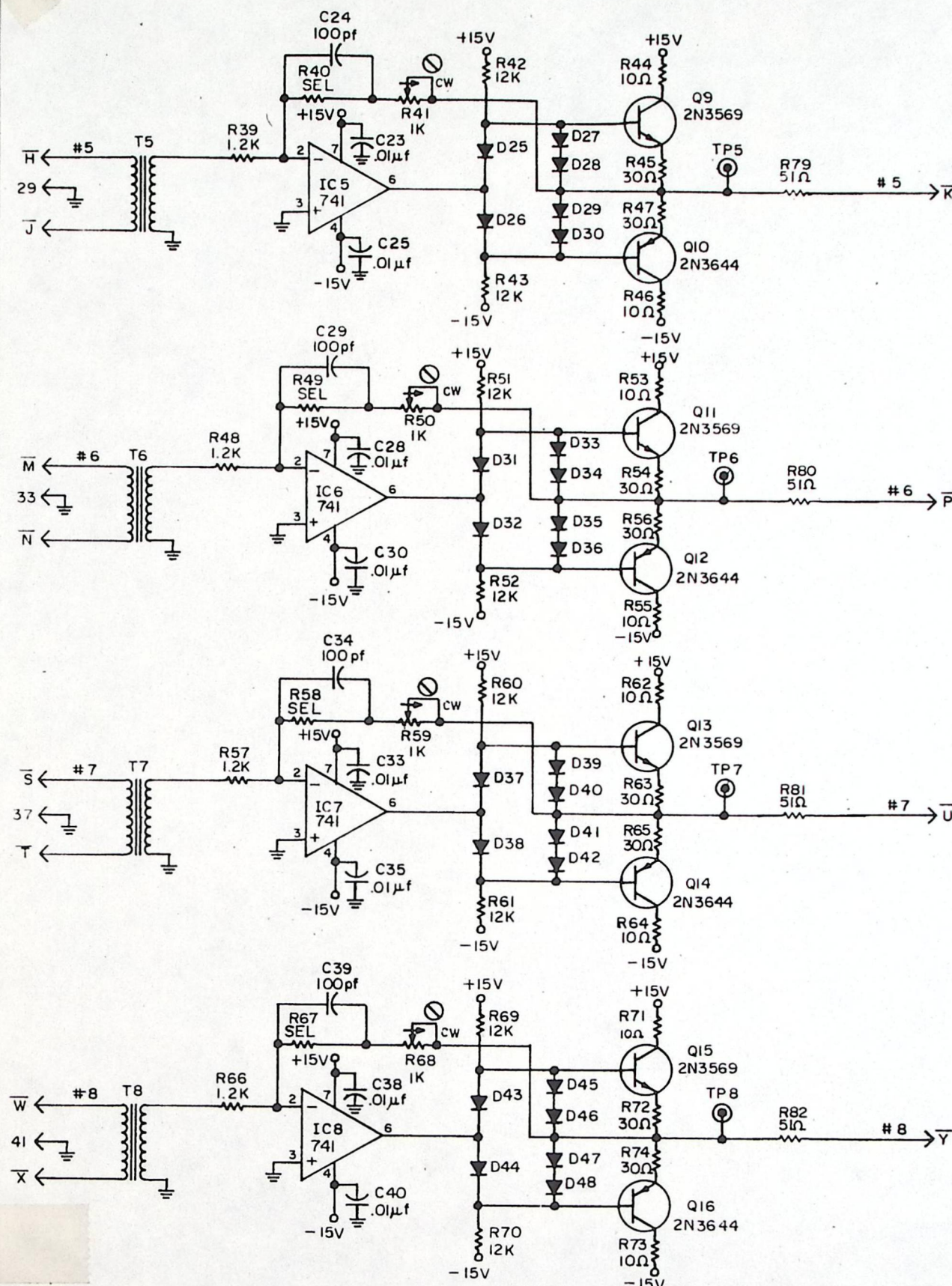
23. A $\leftarrow +5$ 27 Ω 1/2W
24. B $\leftarrow +15$ 27 Ω
21, 22, Y, Z $\leftarrow$ GND
19. W $\leftarrow -15$ 27 Ω

TO PIN 14 OF ALL 74C00, 74C04, 74C10, 74C30
TO PIN 7 OF ALL 74C00, 74C04, 74C10, 74C30.

COMPUTER IMAGE CORPORATION		2475 W. 2nd AVE. DENVER, COLORADO 80223	
DATE	NONE	REVISIONS	032
DATE	1-31-75	059	7-17-75
BY	BARBER	094	8-1-75
APP'VE		181	8-1-75
8x1 AUDIO X-POINT		MOD FOR PRODUCTION AUDIO	
		VS-108C-1	



NOTE:
 T1 THRU T8 = TRANEX Q50513. PRI. 5KΩ SEC 500Ω
 ALL DIODES IN 3064
 ALL RESISTORS ARE 1/4W 5% UNLESS OTHERWISE INDICATED



		2475 W.2nd AVE. DENVER, COLORADO 80223.	
SCALE NONE	REVISION 038	BY LABIN	DATE 4-29-75
DATE 9-15-71	058	7-18-75	3-16-76
DR. M. E. R.	CK'D. 164	3-16-76	3-16-76
TITLE AUDIO INPUT Z AMP			NO. VS-107A